

REMARKS

Favorable consideration of this application is respectfully requested.

Claims 1,2, 4-16, 18-30 are currently active in this case. Claims 1 and 8 have been amended by way of the present amendment. Claims 3 and 17 were previously cancelled. Each amended claim is supported by the specification and claims as originally submitted and no new matter has been added.

Applicants respectfully traverse the rejections based on non-statutory subject matter of Claims 1 and 8.

As amended, Claim 1 recites:

1. (Currently Amended) A method for inferring a requested sequential cell from a candidate cell, comprising the steps of:

a) representing the requested cell as a mathematical expression;

b) representing the candidate cell as a mathematical expression;

c) performing an operation on the requested cell representation with the candidate cell representation to return at least one value;

d) providing a rule corresponding to each returned value;

e) transforming the candidate cell into the requested cell by performing each rule corresponding to each returned value; and

f) generating a netlist using the transformed candidate cell;
wherein the operation performed comprises dividing the polynomial representation of the candidate cell with the polynomial representation of the requested cell.

Applicants respectfully note that Claim 1 not only includes a transformation of a candidate cell into a requested cell. The candidate cell is a mathematical expression, but is not merely a piece of data. Instead, the candidate cell is a functional representation of an electronic component. Moreover, original Claim 1 specifically includes the generation of a netlist (original Claim 1, preamble), of which the candidate cell is part of. For clarity, the netlist is now noted as being part of a step of "generating a netlist using the transformed candidate cell." Therefore, Applicants respectfully submit that Claim 1 meets the statutory patentability requirements because the functional component is transformed and then used in a physical product (the netlist) that is a concrete and tangible result.

As amended, Claim 8 recites:

8. (Currently Amended) A method for inferring a requested sequential cell from a candidate cell, comprising the steps of

a) representing the requested cell as a Preq polynom having a multinom of smallest degree;

b) representing the candidate cell as a Pcand polynom;

c) if neither Preq nor Pcand equals zero, setting a multinom Zreq equal to the multinom of smallest degree of Preq, and if either Preq or Pcand equals zero, performing step f);

d) determining whether Pcand comprises multinoms divisible by Zreq and if so, setting Zcand equal to the smallest degree multinoms of Pcand divisible by Zreq, otherwise setting a polynom Pinhib equal to Pcand, then setting Pcand equal to zero and performing step c);

e) adding to Pinhib multinoms of Pcand having smaller degree than Zcand, subtracting Zcand from Pcand, subtracting Zreq from Preq, adding the polynom quotient of Zcand divided by Zreq to a polynom Ptransform, and then performing step c);

f) if Preq equals zero, then adding Pcand to Pinhib and if Pcand equals zero, then adding Preq to a polynom Pinfer;

g) generating a netlist using the candidate cell.

Claim 8 also includes the generation of a netlist (originally in Claim 8's preamble). For clarification, Claim 8 has been amended to include a step of "generating a netlist using the candidate cell." Therefore, Applicants respectfully submit that Claim 8 also meets the statutory patentability requirements.

Based on the identification of allowable subject matter in Claims 1 and 8, and the statutory subject matter requirements discussed above Applicants respectfully submit that Claims 1 and 8 are patentable. Applicants also respectfully submit that Claims 2, 4-7, and 9-14 are also patentable at least due to their ultimate dependency upon either Claim 1 or Claim 8. Further, in consideration of the claims already allowed, each pending claim is now believed to be in condition for allowance.

Consequently, no further issues are believed to be outstanding, and it is respectfully submitted that this case is in condition for allowance. An early and favorable action is respectfully requested.

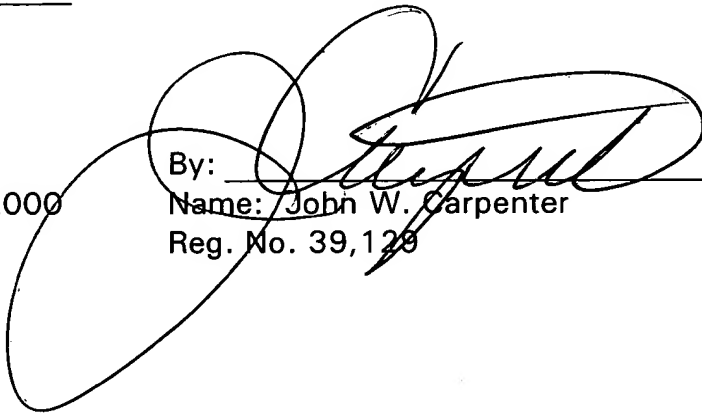
The Commissioner is hereby authorized to charge any fees (or credit any overpayment) associated with this communication and which may be required under 37 CFR §1.78 to Deposit Account No. 50-2603, **referencing Attorney Docket No. 351891.02300. A duplicate sheet is attached.**

Dated: 7/14/2004

Respectfully submitted,

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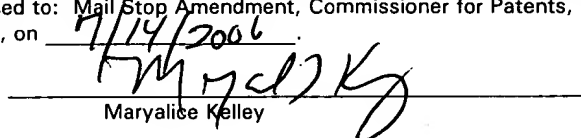
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